

APPENDIX A
HAZARD ANALYSIS WORKSHEETS
TOWN OF GATES ANNEX

Appendix A
Town of Gates Annex
Hazard Analysis Worksheet

Hazard Assessment:

The Town of Gates internal planning committee at its July 8, 2003, meeting, reviewed the Monroe County Pre Disaster Hazard Analysis Worksheet dated 3-20-03. Based upon this review, the committee selected the following hazards for inclusion in the local annex:

Natural Hazards	Rating
• Ice Storm	287.8
• Flood	282.8
• Windstorm	216.2

Technological Hazards	Rating
• Civil Disturbance	271.2
• Hazardous Material (in transit)	262.8

The selection of the hazards, by the committee, was based on several factors as follows:

- Hazard rating
- Past frequency of occurrence
- Potential for mitigation
- Future probability of occurrence
- Conditions which increase risk

Analysis for each hazard selected.

1. Ice Storm –B-1

Ice storm has the highest priority hazard rating (287.8) within Monroe County and its probability of future reoccurrence is high. The largest responsibility for the town, in this type of event, is the clearing of trees, limbs, and other debris from the roadways and the cost of continued law enforcement services throughout the hazard duration. The March 1991 and April 2003, ice storms were costly for the town. In 1991, the town incurred a total cost of \$1,246,240 and in 2003 a cost of \$209,276.

In discussion of possible mitigation measures, the committee realizes the need for more enhanced tree trimming. With enhanced annual funds, through categorical or mitigation grants, the town could hire private contractors to increase tree maintenance in the older more heavily mature treed areas. As a starting point, five areas of the town were identified as the town's most critical areas. To determine a financial mitigation potential, the town assessor calculated the total assessed value of each area. Using an arbitrary calculation of ½ % of total assessed value as a potential mitigation savings the following is realized:

Group	No. of streets in group	Total assessment	½ %	Potential mitigation in dollars
Group 1	3	\$ 7.7M	½%	\$ 38,500
Group 2	3	\$10.8M	½%	54,000
Group 3	4	\$20.7M	½%	103,500
Group 4	5	\$11.9M	½%	59,500
Group 5	5	\$22.7M	½%	113,500
Total				\$369,000

The above potential mitigation would reduce losses through home damage, property damage, insurance claims, and lessen roadway debris resulting in less clean-up. It is realized that this mitigation measure (enhance tree maintenance) would only be implemented in the public right of ways. Any program dealing with tree maintenance along utility wires would have to be performed by the utility company.

2. Flood --B-2

Flood is the second highest priority hazard within Monroe County and has a high probability of reoccurrence. As is evident in the review of Appendix B2 Flood, a number of Monroe County flood occurrences involve Black Creek (March 1993, March 1994, January 1995, April 1996 and January 1998). Little Black Creek, a tributary, flows approximately 3.5 miles through the southwest portion of the town. As Black Creek crests, the danger of flooding increases in its tributary. Even with the town's proactive stance in sediment control, stream corridor protection and vegetative management, the potential for major property loss during a severe flood situation is very probable.

The committee realizes that an engineering study is needed to obtain the various alternatives to prevent future flooding in the Little Black Creek corridor. To attempt to project future mitigation saving resulting from eliminating flooding, the assessor determined the assessed value of a neighborhood adjacent to Little Black Creek. Again, using an arbitrary percentage of assessed value as an indicator to calculate future potential mitigation savings, the following is realized:

Group	Assessed value	10 %	Potential mitigation in dollars
Group 1	6.1 M	10%	\$610,000
Total			\$610,000

Thus if flooding could be prevented in this neighborhood, it could result in a potential mitigation of \$610,000 in property loss and less debris clean-up. Based on the fact that the potential for Little Black Creek to crest is high and the fact that the Town of Gates generally has a high concentration of bedrock, drainage and flooding is a high potential hazard for the town and therefore, included in the plan.

3. Civil Disturbance—B-4

Civil Disturbance is rated 271.2 and is the second highest priority hazard among the technological hazards. Although, it is nearly impossible to predict future occurrences; should they occur, they can be a threat to life and property as well as result in an economic loss to business and the town's business districts.

While appendix B lists racial tension as a “trigger event” for civil disturbance, there are other critical events which could trigger or result in civil disturbance, such as:

- Establishment of a militia or paramilitary group/organization
- Congregation of teen age groups
- Opening of alcoholic serving establishments that cater to young adults
- Concerts that attract teenagers/young adults

While the occurrences, of the above events, are not frequent, they have occurred within the town. Due to the diligence of the town's police force, no major events or incidents have occurred. However, due to the fact that such occurrences have been encountered, the committee selected civil disturbance for inclusion in the plan.

4. Hazardous Material Transport—B-9

Although, hazardous material transport ranked 7th in the technological hazards, events have steadily increased within Monroe County. Upon reviewing the data in Appendix B-9, it is evident that hazardous material transport incidents are on the increase within Monroe County. Between 1998 and 2002, level 0 incidents doubled while level 1 incidents remain steady with a peak in 2001 at 4 such incidents.

The Town of Gates encompasses only 15.06 square miles and is the smallest land area municipality within Monroe County. Conversely, the town is a major urban municipality in Monroe County. Three of the five major interstate routes, (390, 490, & 531) intersect the town. Additionally, there are several urban arterials; Chili Avenue, Buffalo Road, Lyell Avenue, Spencerport Road, Elmgrove Road and Manitou Road located within the town which accommodate heavy truck traffic.

There is a major east/west CSX rail route intersecting the southern portion of the town which transports various goods and materials. The Greater Rochester International Airport fuel storage tanks are located on the town's south east border.

There are two bulk gasoline/oil terminals located within the town borders and a third terminal located a ¼ of a mile from the town line.

Due to the above factors, the town's pre-disaster committee selected B-9, hazardous material transport for inclusion in the plan.

5. Windstorm –B-17

As is evident in review of Appendix B-17, there have been many occurrences of windstorm damage within Monroe County. Of the incidents listed in Appendix B-17, several have caused damage within the Town of Gates (May 31, 1998, September 6, 1998, May 12, 2000, and May 27, 2001). Of these occurrences, the September 6, 1998, storm, known as the Labor Day Windstorm, caused excessive damage to the southeast portion of the town resulting in debris clean-up cost of \$386,136.

Although, windstorm is listed as one of the lowest natural hazards with a rating of 216.2, the committee included it in its plan mainly as a result of the Labor Day 1998 storm.

Mitigation factors that relate to ice storm B-1 would also relate to windstorm. Therefore, mitigation estimates calculated under B-1 would pertain to this section.